

Utah: Bellevue, 9 ♂, 4 ♀; Eureka, 1 ♂; Vineyard, 1 ♂, 1 ♀; Cedar City,
Coal Creek Canyon, 6,250 ft., 1 ♂, 1 ♀; Stockton, 1 ♀.
California: La Crescenta, Los Angeles Co., 4♂.

FURTHER NOTES ON THE MEMBRACID GENUS OPHIDERMA FAIRM. (HEMIP.-HOMOP.).

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In the December, 1919, number of this JOURNAL the writer set forth the results of his study of the Membracid genus *Ophiderma*, but certain of his conclusions were perforce stated tentatively, owing to lack of positive evidence to substantiate them. That lack in some important instances has been supplied during the past season's collecting, and by the proof thus furnished it is found that the deductions therein arrived at chiefly by logical processes are correct.

One of them had to do with Gibson and Wells' *O. fraterna* and its probable status as the male of Goding's *O. flava*. That supposition is now established as a fact. During the month of June, at Litchfield, Conn., males of *fraterna* were frequently taken in association with females of *flava*, and in at least three instances they were taken in copulation; thus removing any possible doubt as to the identity of the former species. As suggested in the paper above referred to, the specific name *fraterna* Gib. & Wells must sink as a synonym of *flava* Godg., and these two very differently colored insects be brought together in our cabinets as the two sexes of the latter species.

My series of males of *flava* taken this past summer consists of fifteen specimens, ranging in date from June 22 to July 1, to wit: the three paired and *in copula* take on *Quercus rubra* (June 29 and 30), three others also on *Q. rubra*, seven on *Q. coccinea* and two on *Q. alba*. The females of this species taken this season were found on the three foregoing species of oak in about the same proportions respectively, but specimens of this sex continued to be taken for more than a month after the males had disappeared, a phenomenon which seems to be usual in the family. In this connection it is significant that the last male taken, on July 1, was dead when beaten from the tree.

In the paper cited a new species, *O. grisea*, was described, based upon a considerable series of females only. The absence of males was there commented on, and the hypothesis suggested that the males might occur early in the season and die soon after mating, the females persisting much later. Such proves to be the case. The past season's collecting in the type locality was begun much earlier than usual, and not only were many additional females of this new species taken, but the male was also found in considerable numbers, sixteen specimens having been secured in association with the opposite sex, three of them paired and in copulation. The dates of capture of the males ranged from June 22 to July 8, the latter date being the date of capture of the first female the season previous; and the host plant was usually *Quercus coccinea* as it had proved to be in the case of the female specimens taken the year before. The description of the male is therefore now available and is here presented:

Ophiderma grisea Woodr.

Male.—Allotype: Slender; hairy pubescent on face and pronotum, a little more sparsely posteriorly. Rather coarsely punctate, more or less glabrous. Pronotum in form as in female, though proportionally somewhat shorter. Color brown to black, vittæ creamy to white. Face and clypeus creamy to white, sutures and callosities black. Pattern as in male of *O. pubescens*, which it resembles, though much smaller, very much more slender, and generally darker. Elytra as in female, but black band crossing mid-elytra, so conspicuous in that sex, obsolescent, commonly not reaching margin. Body beneath black, abdominal segments edged posteriorly with pale. Legs pale, femora above and tibiæ anteriorly black. Length 5-5½ mm.

Allotype in my collection. Taken by me at Litchfield, Conn., June 29, 1920, on *Quercus coccinea*. Paratypes will be placed in the National Museum at Washington and in the American Museum of Natural History at New York.

In the key to the species of the genus, presented with the paper above referred to, this male should perhaps best be placed in the group without dark mid-elytral band, as that character in this sex seems to be subject to a tendency to disappear, and so might find its place under G. (page 260) after ♂ *pubescens* Emmons (the length of which should read 5½-6 mm.), with indicia as follows:

Dark brown to black; slender, 5-5½ mm. in length; strongly arcuate humeral and transverse apical vittæ creamy to white; mid-clytral band indicated.

♂ *grisea* Woodr.

A careful examination of the material in the American Museum of Natural History has brought to light another female specimen which would seem to agree very closely with Goding's *O. flaviguttula*, and I have no hesitation in so assigning it. This example bears a label showing it to have been taken at Newark, New Jersey, May 29, 1910. Several males and females of the author's *definita* are also included in that material, and seventeen more well marked examples, eleven females and six males, have been taken this past season at Litchfield, Conn. The length of this form as given in the key is excessive, and should read ♂ $4\frac{1}{2}$ -5 mm., ♀ 5 - $5\frac{1}{2}$ mm.

NOTES ON THE CRAMBINÆ (LEPIDOPTERA).

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A large part of the following memoranda are based on material collected in various parts of the southern states by the Cornell Biological Expedition in the summer of 1917, and by Prof. J. C. Bradley in his return trip through the same general region in the summer of 1918. The material has not quite all been mounted, but as it is a serious question when the mounting will be finished under present conditions, it has seemed best not to delay this paper further.

The discovery of various genera in which vein R_3 (vein 9) has disappeared, forces us to an extension of Hampson's definition of the subfamily (Proc. Zoöl. Soc. London 1895, 921), but emphasizes the relative value of the characters of the female frenulum and condition of the cell of the hind wing, used by Ragonot in defining his two subfamilies Crambinæ and Ancylolominæ (Ann. Ent. Soc. France (6), 10, 445-447, 1890). The subfamily may be defined as follows:

Pyralids with antennæ simple, laminate, or pectinate, without any special modifications; ocelli most often present; tongue rarely strong, sometimes absent; palpi porrect, beaklike, and sometimes very long; maxillary palpi large, and triangularly scaled; tibæ with normal spurs. Fore wings with first A (1c) completely absent; usually with all veins from cell preserved, R_3 or M_2 sometimes lost, and R_4 also